

### **REMARKS**

Applicant thanks the Examiner for the very thorough consideration given the present application. In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Claims 1-12, 14 and 16-18 are now present in this application. Claims 1, 10 and 16 are independent. Claims 1, 3, 4, 10 and 16 have been amended, and claims 2 and 11 have been canceled. No new matter has been added. Reconsideration of this application, as amended, is respectfully requested.

#### **Allowable Subject Matter**

The Examiner states that claims 2-4 and 11 would be allowable if rewritten in independent form.

Applicant thanks the Examiner for the early indication of allowable subject matter in this application. The limitations of objected-to claim 2 and 11 have been added into independent claims 1 and 10, respectively, and therefore independent claims 1 and 10 should be in condition for allowance. Also, claims 3-9, 12 and 14 depend, either directly or indirectly, from independent claims 1 and 10, and are therefore allowable based on their dependence from claims 1 and 10 which are believed to be allowable.

#### **Rejections Under 35 U.S.C. §§ 102 & 103**

Claims 1, 5-10 and 12, 14 and 16-18 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Zhang. This rejection is respectfully traversed.

As discussed above, independent claims 1 and 10 have been amended to include the allowable subject matter of claims 2 and 11, and claims 2 and 11 have been canceled. Therefore, it is respectfully submitted that amended independent claims 1 and 10, and each of the claims depending therefrom are allowable.

Further, claim 16 has been amended to delete the feature, “wherein the n-type semiconductor layer and the p-type semiconductor layer are contacted with the quantum dots,” and to recite, among other features, “a barrier layer formed on the insulator layer and quantum dots.” This feature is supported at least by Fig. 3 of the present application. For example, Fig. 3 of the present application shows a barrier layer 15 formed on the insulator layer 13 and quantum dots 132.

Zhang et al. teaches quantum dots 90, a silicon dioxide layer 96 where the quantum dots are formed, and a layer 92 formed on the quantum dots. However, nowhere in Zhang et al. teaches a barrier layer formed on the silicon dioxide layer 96 and the quantum dots 90. Therefore, it is respectfully submitted the cited art does not teach or suggest a barrier layer formed on the insulator layer and quantum dots, as recited in amended independent claim 16.

Accordingly, it is respectfully submitted that amended independent claim 16, and each of the claims depending therefrom, are allowable.

### **Conclusion**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Jun S. Ha, Registration No. 58,508, at (703) 205-8000, in the Washington, D.C. area.

Application No. 10/538,078  
Amendment dated March 24, 2009  
Reply to Office Action of December 24, 2008

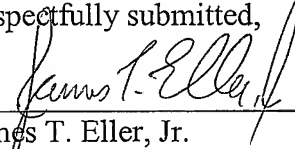
Docket No.: 3449-0500PUS1

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: March 24, 2009

Respectfully submitted,

By  JTE

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